UNITED STATES PATENT AND TRADEMARK OFFICE

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10/534,175	05/05/2005	Shiro Suzuki	09792909-6226	9989

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SONNENSCHEIN NATH & ROSENTHAL LLP
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

EXAMINER
KURR, JASON RICHARD

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 May 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 May 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>5/5/05 9/20/07</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8-11 and 18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 8-9 and 18, Applicant discloses "a program that causes a computer to perform". Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things". They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and the other claimed elements of a computer, which permit the computer program's functionality to be realized. The Applicant has not claimed a computer-readable medium encoded with a computer program, therefor a computer element is not defined as a structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and thus is not statutory. See Lowry, 32 F.3d at 1583-84 USPQ2d at 1035.

With respect to claims 10-11, Applicant discloses "a recording medium storing a code train". The Applicant does not disclose wherein the code train is executable by a computer or processing device in order to perform a task. The present form the claim is considered as merely a signal stored on a recoding medium. Similar to the rejections of

claims 8-9 and 18 above, claims 10-11 are disclosing neither computer components nor

statutory processes, as they are not "acts" being performed, and thus are not statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

Claims 1-3, 5-6, 12 and 14-17 are rejected under 35 U.S.C. 102(e) as being

anticipated by Chen et al (US 7,027,982 B2).

With respect to claim 1, Chen discloses an audio-information encoding apparatus

(fig.2 #200) for dividing an audio signal on a time axis into blocks for every

predetermined time period, frequency transforming and encoding each block (fig.2

#210, col.10 ln.32-67, col.11 ln.1-3), said apparatus comprising: white-noise analyzing

means that analyzes a white-noise component contained in the audio signal (fig.2 #240,

col.11 ln.64-67); white-noise encoding means that encodes an index indicating the

energy level of the white-noise component analyzed by the white-noise analyzing

means (fig.2 #250,260, col.12 ln.19-56).

With respect to claim 2, Chen discloses the audio-information encoding apparatus according to claim 1, wherein the white-noise analyzing means analyzes the white-noise component on the basis of the energy distribution at the high-band part of the block (col.11 ln.56-64).

With respect to claim 3, Chen discloses the audio-information encoding apparatus according to claim 1, wherein the white-noise analyzing means analyzes the white-noise component on the basis of the energy distribution of the entire block (col.11 ln.56-64).

With respect to claim 5, Chen discloses the audio-information encoding apparatus according to claim 1, further comprising gain-control means that controls the gain of the audio signal on the time axis (fig.2 #270, col.12 ln.57-67, col.13 ln.1-6).

With respect to claim 6, Chen discloses an audio-information encoding method for dividing an audio signal on a time axis into blocks for every predetermined time period, frequency transforming and encoding each block (col.10 ln.32-67, col.11 ln.1-3) , the method comprising: a white-noise analyzing step of analyzing a white-noise component contained in the audio signal (col.11 ln.64-67); a white-noise encoding step of encoding an index indicating the energy level of the white-noise component analyzed in the white-noise analyzing step (col.12 ln.19-56).

With respect to claim 12, Chen discloses an audio-information decoding apparatus (fig.3 #300) for decoding an encoded frequency signal, inverse frequency transforming the decoded frequency signal, thereby generating an audio signal on a time axis (col.14 ln.50-56), said apparatus comprising: white-noise generating means

(fig.3 #340) that generates a white-noise component on the time axis, on the basis of an encoded index indicating the energy level of the white-noise component (col.14 ln.24-40); and adding means (fig.3 #370) that adds the audio signal generated on the time axis by means of the inverse frequency transformation and the white-noise component on the time axis (col.14 ln.50-56).

With respect to claim 14, Chen discloses the audio-information decoding apparatus according to claim 12, wherein the white-noise generating means generates the white-noise component on the basis of a specific value contained in a code train (col.14 ln.24-40).

With respect to claim 15, Chen discloses the audio-information decoding apparatus according to claim 14, wherein the specific value is normalization information or quantization precision information (col.14 ln.16-23).

With respect to claim 16, Chen discloses the audio-information decoding apparatus according to claim 12, which further comprising gain compensating means that compensates for the gain of the audio signal obtained, on the time axis, by means of the inverse frequency transformation, wherein the adding means adds the audio signal on the time axis, thus gain-compensated, and the white-noise component on the time axis (col.14 ln.11-56).

With respect to claim 17, Chen discloses an audio-information decoding method for decoding an encoded frequency signal, inverse frequency transforming the decoded frequency signal, thereby generating an audio signal on a time axis (col.14 ln.50-56), said method comprising: a white-noise generating step of generating a white-noise

component on the time axis, on the basis of an encoded index indicating the energy

level of the white-noise component (col.14 ln.24-40); and an adding step of adding the

audio signal generated on the time axis by means of the inverse frequency

transformation and the white-noise component on the time axis (col.14 ln.50-56).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Chen et al (US 7,027,982 B2) in view of Chiang et al (US 6,779,015 B1).

With respect to claim 4, Chen discloses the audio-information encoding

apparatus according to claim 1, wherein white-noise encoding means further encodes

an index (col.12 ln.19-31, "weighting factors") that is used to generate a white-noise

component in a decoding side.

Chen does not disclose expressly wherein the index is of a random number

table.

Chiang discloses a method of encoding a signal through the use of a random

number look-up table (col.2 ln.1-31). At the time of the invention it would have been

obvious to a person of ordinary skill in the art to use the methods of Chiang to encode

the audio signal of Chen. The motivation for doing so would have been to provide an

encoding method that is accurate and provides efficient use of limited memory.

With respect to claim 7, Chen discloses the audio-information encoding method

according to claim 6, wherein an index (col.12 ln.19-31, "weighting factors") that is used

to generate a white-noise component in a decoding side is further encoded in the white-

noise encoding step.

Chen does not disclose expressly wherein the index is of a random number

table.

Chiang discloses a method of encoding a signal through the use of a random

number look-up table (col.2 ln.1-31). At the time of the invention it would have been

obvious to a person of ordinary skill in the art to use the methods of Chiang to encode

the audio signal of Chen. The motivation for doing so would have been to provide an

encoding method that is accurate and provides efficient use of limited memory.

With respect to claim 13, Chen discloses the audio-information decoding

apparatus according to claim 12, wherein the white-noise generating means generates

the white-noise component on the basis of the encoded index (col.14 ln.30-40).

Chen does not disclose expressly wherein the index is of a random number

table.

Chiang discloses a method of encoding a signal through the use of a random

number look-up table (col.2 ln.1-31). At the time of the invention it would have been

obvious to a person of ordinary skill in the art to use the methods of Chiang to encode

the audio signal of Chen. The motivation for doing so would have been to provide an

encoding method that is accurate and provides efficient use of limited memory.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Fujiwara et al (US 5,115,240) discloses a method and apparatus for encoding

audio signals divided into a plurality of frequency bands.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JASON R. KURR whose telephone number is (571)272-

0552. The examiner can normally be reached on M-F 10:00am to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Vivian Chin can be reached on (571) 273-7848. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason R Kurr/
Examiner, Art Unit 2615

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2615